



ENERGY POLICY UPDATE

May 20, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email [Gloria Castro](mailto:Gloria.Castro@azgop.com).

UPCOMING WEBINARS

The 2014 Farm Bill's Renewable Energy for America Program
Wednesday, May 21, 3:00 p.m. - 4:00 p.m. Eastern Daylight Time.
[Learn how to join the webinar.](#)

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The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

[Mesa Adds More Solar Power](#)

[Ahwatukee Foothills News, May 18] Mesa recently opened the largest solar facility in city history at the Red Mountain Library, 635 N. Power Road. The facility will generate 560,599 kilowatt hours of energy annually and save the city \$425,000 over 20 years. The system is rated at 346.9 kilowatts.

[On-Site Solar Could Spawn Tax Consequences](#)

[Energy Manager Today, May 16] Utilities across the country are lobbying for Value of Solar Tariffs (VOSTs), which might trigger a requirement for solar owners to pay taxes on the income from selling their excess solar power to the local utility, according to The Alliance for Solar Choice (TASC). When discussing whether VOSTs are a sale that results in taxes, Edison Electric Institute's General Counsel Edward Comer stated, "If (the utility is) required to purchase the power, I think legally there's a sale." Speaking at an Arizona Corporation Commission solar workshop recently, Comer also said that solar owners might face these taxes even if the utility provides a credit via net metering to the customer rather than a payment. "I don't think that there's really a distinction whether a utility pays through a credit or a payment," said Comer.

[Proposed UNS Energy Buyout Gaining Support — and Conditions](#)

[Arizona Daily Star, May 11] The proposed buyout of Tucson Electric Power Co. parent UNS Energy Corp. by Canadian utility giant Fortis Inc. is gathering conditional support among stakeholders. But as the matter heads toward state regulatory hearings in mid-June, parties including consumer advocates and unions are seeking concessions such as more cash to lower rates and help low-income ratepayers, and a longer assurance that employees won't be laid off. Formal settlement talks began last week between the utility, Fortis, the Arizona Corporation Commission staff and other parties to the case. The reception to the \$4.3 billion deal for UNS has generally been positive, largely because Fortis is a longtime utility company that plans to leave UNS under local management and control, said Patrick Quinn, director of the state Residential Utility Consumer Office, or RUCO. In contrast, state regulators in 2004 rejected a proposed leveraged buyout of UNS Energy by a private-equity group including Kohlberg Kravis Roberts, balking at the addition of up to \$660 million in new debt that deal would have entailed. Under the deal announced in December, Fortis would acquire UNS Energy in a cash deal worth \$60.25 per share or about \$4.3 billion, including the assumption of about \$1.8 billion in debt. Besides giving shareholders a premium on their shares, UNS says joining Fortis would improve UNS Energy's

access to capital to fund its ongoing moves to diversify its generating fleet away from a reliance on coal, as well as investment in other infrastructure improvements. Fortis, a publicly traded company worth nearly \$7 billion, also has agreed to inject \$200 million of equity capital into UNS Energy. Under the deal announced in December, Fortis would acquire UNS Energy in a cash deal worth \$60.25 per share or about \$4.3 billion, including the assumption of about \$1.8 billion in debt.

[Sun Cities Oppose Solar Fee, Tax](#)

The last meeting of the Property Owners and Residents Association of Sun City West was packed with residents waiting to get their turn to talk to Arizona public officials. Many of them had concerns about solar energy during the meeting that included state and county elected officials. Many Sun City West residents oppose a \$5 monthly fee being charged by APS to new solar customers. APS filed for the fee to help offset expenses of supplying electricity 24/7. The fee, approved by the Arizona Corporation Commission, took effect Jan. 1. Anyone who had solar before will not have to pay the fee. "There are certain fixed costs because they use the grid 24 hours a day, seven days a week. Everybody uses the grid. Our companies with rooftop solar have not been paying their share to fixed costs. That's what the \$5 fee is intended to address," said APS communications manager Jim McDonald in a phone interview. A number of Sun City West residents expressed their outrage in PORA's last meeting on having to pay added fees for solar.

ALTERNATIVE ENERGY & EFFICIENCY

[Nest Thermostat Reduces Peak Load 55%](#)

[Energy Manager Today, May 16] Nest Labs says in summer 2013, its Rush Hour Rewards program via its learning thermostat delivered an average of 55 percent energy reduction in residential air conditioning loads during peak times, while its Seasonal Savings program helped customers lower their overall air conditioning runtime by 4.7 percent. Nest found that 84 percent of customers who participated in Rush Hour Rewards and 89 percent of customers who participated in Seasonal Savings said they were just as thermally comfortable as they were before they participated in the programs. Rush Hour Rewards adjusts thermostats during peak demand. With Seasonal Savings, a Nest thermostat uses its knowledge of a customer's schedule and preferences to gradually fine-tune the temperature schedule to save energy. Both services are offered only through Nest's energy partners. Google-owned Nest has made a huge splash in the residential energy efficiency world, not only with its technology, but with its partnerships.

[Senator Murkowski Releases White Paper on Energy and Water Interdependencies](#)

[NASEO website, May 14] On Tuesday, May 6, Senator Lisa Murkowski (R-Alaska) released a white paper to promote her legislation to coordinate federal efforts related to the conservation of energy and water and how each depends on the other for production. Murkowski introduced the Nexus of Energy and Water for Sustainability Act with Sen. Ron Wyden (D-Ore.) in January. Her white paper explores how heavily the energy and water industries rely on each other, and how technology could reduce the need for each. [Click for More Information](#)

ENERGY/GENERAL

[Here's What Chinese Hackers Actually Stole From U.S. Companies](#)

A run-down of exactly what "trade secrets" Chinese hackers are accused of stealing from U.S. metals and solar power companies, and a labor union

[TIME.com, May 20] Five Chinese military hackers employed by the Chinese government were accused yesterday of infiltrating American companies and stealing trade secrets. By charging the men with economic espionage and identity theft, among other crimes, the Department of Justice has set the stage for a tense standoff with the Chinese government. If the allegations are true, the Chinese government has aimed at the very heart of American enterprise. The apparent victims of the hacking are American titans: U.S. Steel, the nation's oldest and biggest steel manufacturer and the lovechild of tycoons Andrew Carnegie and J.P. Morgan; Alcoa, the world's third-largest aluminum maker; Westinghouse Electrical Company, one of the world's leading nuclear power developers; SolarWorld AG a leading solar technology company; and the United Steelworkers, among America's most iconic labor unions. The Chinese foreign ministry spokesman Qin Gang called the claims baseless, "made-up" and hypocritical, but the Justice Department is adamant.

[In Taking Crimea, Putin Gains a Sea of Fuel Reserves](#)

[New York Times, May 17] When Russia seized Crimea in March, it acquired not just the Crimean landmass but also a maritime zone more than three times its size with the rights to underwater resources potentially worth trillions of dollars. Russia portrayed the takeover as reclamation of its rightful territory, drawing no attention to the oil and gas rush that had recently been heating up in the Black Sea. But the move also extended Russia's maritime boundaries, quietly giving Russia

dominion over vast oil and gas reserves while dealing a crippling blow to Ukraine's hopes for energy independence. Russia did so under an international accord that gives nations sovereignty over areas up to 230 miles from their shorelines. It had tried, unsuccessfully, to gain access to energy resources in the same territory in a pact with Ukraine less than two years earlier. "It's a big deal," said Carol R. Saivetz, a Eurasian expert in the Security Studies Program of the Massachusetts Institute of Technology. "It deprives Ukraine of the possibility of developing these resources and gives them to Russia. It makes Ukraine more vulnerable to Russian pressure." Gilles Lericolais, the director of European and international affairs at France's state oceanographic group, called Russia's annexation of Crimea "so obvious" as a play for offshore riches.

[Mexican Energy Agenda Attracts Support](#)

[Energy Manager Today, May 19] The Children's Investment Fund Foundation (CIFF) said it is working with the 21st Century Power Partnership to help strengthen Mexico's renewable energy effort and will provide financial support. Up to \$3.9 million will support the 21st Century Power Partnership to create and operate a platform for power sector technical support for the Mexican federal government as part of its energy reform agenda. The 21st Century Power Partnership is an initiative of the Clean Energy Ministerial, a global forum to facilitate the transition to a global clean energy economy. The investment allows for the expansion of technical assistance from the international network of power system experts to strengthen and support Mexico's power sector, according to National Renewable Energy Laboratory (NREL). NREL and its institutional partner, the Joint Institute for Strategic Energy Analysis, act as operating agent of the Power Partnership and will manage the new program. The activities in this program have been developed in partnership with key stakeholders from the Mexican energy system, including the Secretariat of Energy (SENER), Federal Electricity Commission (CFE), Energy Regulatory Commission (CRE), and Electricity Research Institute (IIE). The CIFF funding will be spread over a three-year period.

[Oil Up Near \\$103 Amid Libya, Ukraine Conflicts](#)

[Arizona Daily Star, May 19] The price of oil approached \$103 a barrel Monday as violence in Libya threatened to once again delay a potential increase in the country's exports of crude. By early afternoon in Europe, benchmark U.S. crude for June delivery was up 78 cents to \$102.80 a barrel in electronic trading on the New York Mercantile Exchange. On Friday, the Nymex contract added 52 cents to close at \$102.02, gaining about 2 percent for the week. Brent crude for July delivery, a benchmark for international oil, was up 35 cents to \$110.10 on the ICE Futures exchange in London. In Libya, which has Africa's largest proven reserves of crude, political instability deepened Sunday after militiamen loyal to a renegade general stormed the parliament building in the capital city of Tripoli. On Monday, the country's army chief ordered the deployment of Islamist-led militias in Tripoli, which could lead to a showdown between the two sides. Libya, earlier a key crude supplier to European refineries, has been struggling to stabilize its oil output and exports since the 2011 ouster of dictator Moammar Gadhafi. Production is down to around 200,000 barrels a day from some 1.4 million barrels a day a year ago.

[Propane Battles Natural Gas for Share of U.S. Transport Market](#)

[Reuters, May 15] NEW YORK – Last November, Nicholas Jackson, the transport chief responsible for Cleveland's school buses, found himself in the middle of a battle for business in the niche world of alternative fuels. Tasked with replacing an aging fleet of diesel-powered buses and saving money, he had to choose the best fuel option for his fleet: either compressed natural gas (CNG), a cheap and clean option that powers fleets of buses and garbage trucks in cities from New York to Los Angeles; or propane, a less-used but simpler fuel that's been gaining in popularity. He chose propane, and this month the city's Municipal School District finished taking delivery of 49 new propane-fuel buses. The new buses will save the school district about \$95,000 a year in fuel costs, based on prices that are about 35 percent lower per gallon, easily offsetting the slightly better mileage diesel gets. "There was some thought about natural gas," Jackson said, but the cost of building a CNG fueling station, which can top \$1 million, and refitting his maintenance facilities with venting in case of a gas leak, proved too expensive. "We wanted to move down the propane route because it was easier to refuel and it was cheaper. Propane is the best alternative fuel to use right now." Traditionally used to heat homes and fire up barbecues, propane used to be viewed as unlikely to contend with CNG for widespread vehicle use due to its relatively higher cost and the difficulties in transporting the fuel across country. Propane costs \$2.43 a gallon on average at private refueling stations, compared to \$1.80 for CNG and \$3.74 for diesel, according to U.S. government data. That's starting to change as the fracking energy boom spurs a surge in the production of liquid petroleum gas, including propane, and driving down prices. Propane is a by-product of oil and natural-gas drilling.

INDUSTRIES AND TECHNOLOGIES

[Energy Storage Systems for Microgrids to Reach Nearly \\$4.2 Billion in Market Value by 2024](#)

Technology can help reduce the payback period on microgrid installations, report finds

[Navigant Research, May 12] Delivering services both to microgrids and, in the case of grid-tied systems, to the centralized grid, energy storage is becoming an essential enabling technology for all types of microgrids. Energy storage can reduce the payback period of the microgrid, by enabling an increase in the penetration of renewable energy sources or by reducing diesel fuel consumption. According to a recent report from Navigant Research, the worldwide market value for energy storage for microgrids will grow from \$662 million annually in 2014 to nearly \$4.2 billion in 2024. "Rapid expansion of the microgrid market over the next 10 years will drive increased demand for energy storage associated with these systems," says Anissa Dehamna, senior research analyst with Navigant Research. "Energy storage systems can also allow participation in deregulated ancillary service markets, further improving the economics of the overall system." The strongest market for energy storage for microgrids, according to the report, will be the grid-tied customer-owned microgrid segment in North America, which is supported by robust growth in microgrids and favorable regulatory developments. Technology adoption in this region is balanced between all technologies, with an emphasis on lithium ion (Li-ion) batteries, which are anticipated to represent up to 40 percent market share in North America by 2024.

[Musk Sees Need for Hundreds of Battery 'Gigafactories'](#)

[Bloomberg, May 15] Tesla Motors Inc. (TSLA)'s Elon Musk said the need for lower-cost batteries for autos and power storage means there will need to be hundreds of "gigafactories" like the one the carmaker is planning to build. The electric-car company based in Palo Alto, California, anticipates the battery factory will reduce the cost of lithium-ion cells by more than its initial guidance of 30 percent, Musk said. He spoke yesterday at the World Energy Innovation Forum, an annual conference hosted by Tesla board member Ira Ehrenpreis. "I think we can probably do better than 30 percent," Musk, 42, said yesterday at the company's Fremont, California, plant. As carmakers increase demand for batteries "there's going to need to be lots of gigafactories. Just to supply auto demand you need 200 gigafactories," he said. Tesla is getting close to deciding where it will build the first such proposed facility, which Musk has said will cost as much as \$5 billion and involve partner companies such as Panasonic Corp. (6752) Last week he said groundbreaking at one of at least two potential sites could happen as early as June.

[New Twists in Turning Hot Air into Horsepower](#)

[New York Times, May 9] In the half-century since it first appeared under the hood of production cars, the turbocharger has gone from a silver-bullet amplifier of horsepower to a device so widely used it seems on its way to becoming a fixture of every new model. In truth, the old dog has learned impressive new tricks, schooled in part by 2014 rules changes in Formula One racing that mandate smaller, less thirsty engines. In its new job description, the turbocharger is also a producer of electrical power for potent hybrid systems. The basics have not changed: Turbochargers still harvest the energy of the hot exhaust stream to pump air into the engine under pressure, increasing horsepower. For everyday use, this technology lets carmakers install downsized, highly efficient engines that can still produce the power required for highway driving. There are limits to how far the technology can be pushed. In Formula One racing, where turbocharged 1.6-liter V6 engines are used in place of the naturally aspirated 2.4-liter V8s of recent years, those limits also prove to be opportunities. Because an engine can stand only so much pressure in its cylinders, and because a turbocharger should spin only so fast to assure reliability, engine designers add a valve that can open to dump some of the exhaust gases before they reach the turbine section of the turbocharger. This device, called a waste gate, is a necessary sacrifice, throwing away some of the combustion heat in trade for engine longevity.

[Panasonic Targets Factory Rooftops for Solar Expansion in Japan](#)

[Bloomberg, May 13] Panasonic Corp. (6752) is aiming to sell more solar panels specifically designed for the rooftops of factories and warehouses, a market it sees ripe with potential as Japan introduces rules that threaten to stymie the development of larger solar farms built on open land. Panasonic will start selling panels in June that are able to be installed more efficiently on corrugated factory roofing, Kazuhiro Yoshida, who heads the Osaka-based company's solar division, said in an interview yesterday. The newer products are designed to more than double generation capacity by fitting more panels on a single rooftop, Yoshida said. The Japanese electronics maker had been focusing on residential and small-size rooftops in Japan with its HIT-brand solar cells. The company is now adding a segment ranging from 50 kilowatts to 500 kilowatts in capacity, Yoshida said. "Space is no longer left for mega-solar projects and you may encounter grid connection problems," he said, referring to utility-scale solar projects typically of 1

megawatt or larger. "We expect middle-sized projects will expand rather than mega-solars," he said. One megawatt equals 1,000 kilowatts. A change announced earlier this year by [Japan's](#) trade ministry may curb the expansion of utility-scale projects, Yoshida said. After finding hundreds of larger projects had been delayed, the ministry set a 6-month deadline for developers to secure land and equipment after getting approval, a requirement that is tougher for larger projects.

[Seeing Future in Fuel Cells, Toyota Ends Tesla Deal](#)

[New York Times, May 12] Toyota said on Monday that it would allow a battery-supply deal with Tesla Motors to expire this year and would focus instead on building cars running on hydrogen fuel cells, a next-generation technology that rivals Tesla's all-electric systems. Toyota Motor invested \$50 million in Tesla to acquire a 3 percent stake in the Silicon Valley upstart in 2010, and signed a \$100 million joint-development deal in 2011 for a version of Toyota's RAV4 crossover sport utility vehicle that carried Tesla's electric powertrains. At the time, the two automakers suggested that the RAV4 electric vehicle could be the start of a wider collaboration. But the electric RAV4 has sold poorly, despite low-cost lease and loan offers Toyota introduced last year to promote sales. And Toyota has increasingly signaled that it sees fuel cells as the most viable zero-emissions technology, putting it at odds with Tesla, an evangelist for electric-vehicle technology. Toyota is also the world's biggest manufacturer of gas-electric hybrids. Toyota said in an emailed statement that it was "re-evaluating" its RAV4 electric vehicle, and that Tesla's supply agreement for the model would "conclude this year." Toyota said that its contract had called for Tesla to supply 2,500 battery-electric powertrains for the RAV4. The Japanese automaker said its focus this year would instead be on its four-door sedan powered by hydrogen fuel cells, which it plans to introduce in California next year. The automaker will also focus on developing hydrogen refueling stations to support fuel-cell technology, it said.

LEGISLATION AND REGULATION

[Biodiesel Producers Ask Lawmakers to Reinstate Tax Incentive](#)

[GlobeGazette.com, May 14] WASHINGTON – Biodiesel producers and other advocates, include the general manager of Renewable Energy Group (REG) Mason City, joined a group of U.S. senators at a press conference Wednesday in calling for Congress and the Administration to act quickly to restore the industry's progress by supporting a strong RFS and reinstating the tax incentive. "Biodiesel has proven itself to be a successful homegrown, homemade fuel," said Bryan Christjansen, general manager at Renewable Energy Group's refineries in Mason City and Albert Lea, Minn. "If the administration chooses to go with the EPA proposal, it does not just put domestic fuel production in jeopardy, it harms local economies and billions of dollars of investments." Policy setbacks in Washington are taking a major toll on the most successful advanced biofuel in the U.S., according to a nationwide survey of biodiesel producers released Wednesday.

[Obama Said To Consider Power-Plant Rule That Tests Law](#)

[Bloomberg, May 15] The Obama administration is considering cutting greenhouse-gas emissions from power plants by reaching beyond the plants themselves -- an unusual approach that could run afoul of anti-pollution laws. People familiar with the discussions say the administration is seeking steep reductions -- as much as 25 percent -- that could be met if power plant owners expand renewable energy, improve the efficiency of their grids or encourage customers to use less power. There's disagreement even within the administration about what's allowable under the [Clean Air Act](#), the law that gives it the authority to curb emissions. Some administration attorneys are warning that the government could lose a legal challenge if it seeks to regulate beyond a plant's smokestack, said the people, who spoke on the condition of anonymity because the rule is still being written. The full mandate may be phased in over 15 years, as a way to soften the blow on utilities. The rules will probably draw fierce resistance from coal companies and their allies in Congress who warn of higher electricity prices and lost jobs. "My gut tells me they're going to go down the path of desirability and not reliability, of what they'd like to see in a perfect world," said Senator Joe Manchin, a West Virginia Democrat allied with the coal industry. "That's fine but we're not there." A White House official who requested anonymity says a final decision hasn't been made.

[SolarWorld Named Among U.S. Victims of Chinese Cyber Attack](#)

[Sustainable Business Oregon, May 19] SolarWorld has been named a victim of Chinese state cyber attacks by U.S. Attorney General Eric Holder. A U.S. grand jury has indicted five Chinese military officers for allegedly hacking into computer systems and stealing trade secrets. The violation affected six companies, including SolarWorld AG, the German renewable energy giant that keeps its U.S. headquarters in Hillsboro. U.S. Attorney General Eric Holder addressed the

attacks in a press conference Monday, saying that "enough is enough" when it comes to Chinese state economic espionage. Holder claimed it was the first time the U.S. has produced material evidence against the Chinese government for this type of crime. According to NBC News, cost, pricing and strategy information was stolen from SolarWorld's systems during a time when the company was feeling pressure from alleged price fixing by China's nationalized solar industry.

[U.S. Solar Experts Say IRS Tax Proposal Little Help To Big Projects](#)

[Reuters, May 13] WASHINGTON – An attempt by the Obama administration to use tax breaks to boost solar energy businesses falls short of expectations among industry officials who were hoping to lure more investors for their projects, analysts and tax lawyers said on Tuesday. They said the proposal released on Friday by the Internal Revenue Service would do little to increase the number of the projects that could qualify for a tax-saving business structure known as a "real estate investment trust." For years, the clean energy industry has sought to have large-scale solar production facilities qualify for REIT status. Those hopes dimmed with the IRS's latest guidance, industry experts said. To qualify as a REIT, a business must have at least 75 percent of its holdings in real estate assets. REITs are not required to pay corporate tax but must distribute most of their income to investors.

WESTERN POWER

[Elon Musk Sees Nearly Unlimited Demand For Energy Storage](#)

[San Francisco Gate, May 15] Tesla Motors CEO Elon Musk said Wednesday that the world will need to build several lithium-ion battery factories to meet a "quasi-infinite demand for energy storage." Speaking at the World Energy Innovation Forum, Musk said Tesla Motors alone needs its planned \$5 billion lithium battery factory to continue the company's rapid growth. Without the proposed "gigafactory" the electric-car maker would lack the batteries it needs to ramp up car production and introduce new models, he said. "We're building the gigafactory because we can't think of any other way to scale," Musk told the energy forum at the company's factory in Fremont. "We either hit the sides of the Petri dish, or we build a bigger Petri dish." The forum, which focused on market-transforming ideas in energy, took place in a corner of the sprawling auto plant where Tesla makes its second car model, the Model S. The proposed gigafactory would double worldwide production of lithium-ion batteries, which could help lower battery production costs 30 percent just in its first year of full-scale operation. Tesla hopes to use those savings to create its \$35,000 Gen 3 car, the company's first car aimed at the middle class. The plant will not only supply Tesla but also Solar leasing company SolarCity. The company, which Musk chairs, started a pilot program that offers California homeowners Tesla battery packs to store electricity generated by rooftop solar panels.

[Gas and Solar to Ease California Hydro Shortage, Says CAISO](#)

[RenewableEnergyWorld.com, May 20] Substantial new gas-fired and solar generation that have been added to the California grid over the past year are expected to take up the slack this summer as an ongoing severe drought has led to substantial limitations on hydroelectric generation, according the summer 2014 assessment from the California Independent System Operator (CAISO). According to the California Department of Water Resources, 2014 is shaping up as one of the driest years on record. Statewide hydrological conditions are well below normal: snowpack in the Sierra Nevada mountains, which serves as a key water resource during the summer, is currently at 19% of historical average, while state reservoir storage is at 63% of average and far below capacity. The result, according to [the CAISO assessment](#), is that at least 1,370 MW of hydroelectric capacity will be unavailable this summer, with potentially as much as 1,669 MW offline. In addition, limitations on cooling water withdrawals may lead to the shutdown of up to 1,150 MW of thermal capacity. This challenge comes on the heels of last year's [early retirement of the San Onofre Nuclear Generating Station](#), which took another 2,200 MW of capacity off the grid. Despite all this, CAISO says it should be able to maintain a healthy 23.8% reserve margin this summer as a result of more than 3,500 MW of new grid-scale capacity the state has added since last summer. Of this, about two-thirds is solar and most of the rest is natural gas-fired. The assessment dryly notes, "It is worth mentioning that the operating reserve margin projected for 2014 is the second largest in the past ten years."

[NM Rail Hub for Oil Operations Begins Construction](#)

[ENR Southwest, May 14] CARLSBAD – Although Southeastern New Mexico's oil and gas industry has been booming, it has grown without any streamlined depot for necessary essential hydraulic fracturing supplies. Now fracking crews can improve their efficiency in the oil fields east of Carlsbad thanks to a new project developed by Rangeland Energy. The company, headquartered in Sugar Land, Texas, began construction on its rail spur near Loving on Tuesday.

The Rangeland Integrated Oil System, or RIO Hub for short, will provide frack sand suppliers with facilities for moving products into the Delaware Basin oil fields by rail. The RIO Hub will also provide storage, blending and rail-loading facilities for outbound crude oil and condensate. Crude oil marketers, refiners and producers have all lined up to pay Rangeland Energy to use the rail hub which will be served by the BNSF Railway. "We've had a great reception in Loving and Carlsbad and we're excited to kick off construction," said Chris Keene, Rangeland Energy's president and CEO. "Certainly the area within a 75-mile radius will greatly benefit producers and marketers." Rangeland Energy expects to begin truck-to-rail loading operations for crude oil to begin in October with an initial capacity of 10,000 barrels per day. As customer demand increases, Rangeland Energy will build additional infrastructure to bring capacity to more than 100,000 barrels of crude per day. The RIO Hub will also be able to accommodate more than 500,000 tons of frack sand per year, with the potential to handle more than 1 million tons of frack sand per year. The company plans to initially hire approximately 20 employees to work at the site and could make additional hires later once the hub grows to bring the total amount of workers to around 50 people according to Keene.

Texas Mulls Capacity Market

Proposal closely watched

[EnergyBiz.com, May 15] A capacity market may be the greatest thing since sliced bread, but it's not an easy sell. Even PJM Interconnection, the world's largest competitive electricity market, which is very happy with its shift to a capacity market, found that the hardest part was to get regulators and stakeholders to buy into the concept. "The biggest hurdle was getting the regulatory approvals," Terry Boston, PJM CEO, said. "But just getting stakeholder agreement was also an obstacle." However, the system has functioned well in reducing the rate of economic retirements, Boston said, and now that cheaper shale gas and new EPA regulations are having an effect, it is contributing to a highly efficient capacity. "It has attracted 28,000 megawatts of new capacity, largely combined-cycle", he said. As the Electric Reliability Council of Texas mulls adoption of a capacity market model, the pros and cons of such a shift are being carefully scrutinized.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- [Job Training](#)
- [Quality Jobs](#)
- [Qualified Facility](#)
- [Computer Data Center Program](#)
- [Research & Development](#)
- [Foreign Trade Zone](#)
- [Military Reuse Zone](#)
- [Angel Investment](#)
- [Renewable Energy Tax Incentive](#)
- [Healthy Forest](#)
- [Sales Tax Exemption for Machinery and Equipment](#)
- [Lease Excise](#)
- [Additional Depreciation](#)
- [Work Opportunity](#)
- [Commercial/Industrial Solar](#)
- [SBIR/STTR](#)

- [Private Activity Bonds](#)
- [QECB's](#)

(ACA) PROGRAMS

DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#) - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- [Bioenergy Technologies Incubator](#) Close Date: May 23, 2014
- [Clean Energy Manufacturing Innovation Institute for Composite Materials & Structures](#) Close Date: June 19, 2014
- [Solar Market Pathways](#) Concept Paper Submission Deadline: May 28, 2014 5:00 PM ET. Full Application Submission Deadline: July 3, 2014 5:00 PM ET.
- [Sunshot "Race to the Roof" Initiative](#) Registration Due: October 31, 2014
- [Energy, Power, and Adaptive Systems](#) Close Date: November 3, 2014
- [NSF/DOE Partnership on Advanced Frontiers in Renewable Hydrogen Fuel Production Via Solar Water Splitting Technologies 2014-2016](#) Close Date: Dec. 11, 2014
- [Energy for Sustainability](#) Response Due: February 19, 2015
- [Advanced Fossil Energy Projects - Solicitation Number: DE-SOL-0006303](#) Expiration Date: November 30, 2016
- [Energy Department Announces Next Phase of L Prize Competition to Create Innovative Energy-Saving Lighting Products](#) – Notification of Intent to Submit Product minimum of 30 days, but no more than 45 days prior to product submission. Monetary prize goes to the first successful entrant with the earliest timestamp.
- [Repowering Assistance Program](#) – Ongoing
- [Rural Business Enterprise Grants](#) – Ongoing
- [Rural Business Opportunity Grants](#) – Ongoing
- [Sustainable Agriculture Research and Education Grants](#) – Ongoing
- [Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power](#) – Various Deadlines
- [U.S. Dept. of Agriculture - Rural Development Grant Assistance](#)
- [Green Refinance Plus](#) - Ongoing

ENERGY-RELATED EVENTS

2014

- ✚ [Dept. of Energy's 13th Annual Small Business Forum & Expo](#)
June 10-12, 2014 Tampa, FL
- ✚ [Native American Economic Development & Energy Projects Conference](#)
June 16-17, 2014 Anaheim, CA
- ✚ [AZBio Expo 2014](#)
June 19, 2014 Scottsdale, AZ
- ✚ [32nd Annual West Coast Energy Management Congress](#)
June 25-26, 2014 Seattle, WA
- ✚ [Solar 2014: 43rd Annual Conference](#)
July 6-10, 2014 San Francisco, CA
- ✚ [National Geothermal Summit](#)
August 5-6, 2014 Reno, NV
- ✚ [2014 ACEEE Summer Study on Energy Efficiency in Buildings](#)
August 17-22, 2014 Pacific Grove, CA
- ✚ [EPI's 4th Annual Energy Policy Research Conference](#)
September 4-5, 2014 San Francisco, CA
- ✚ [HTUF 2014 National Meeting - The Forum for Action in High-Efficiency Commercial Vehicles](#)
September 22-24, 2014 Argonne, National Lab Argonne, IL
- ✚ [Geothermal Energy Expo](#)
September 28-October 1, 2014 Portland, OR
- ✚ [Solar Power International](#)
Oct. 20-23, 2014 Las Vegas, NV
- ✚ [GreenBuild International Conference & Expo](#)
October 22-24, 2014 New Orleans, LA
- ✚ [Governor's Celebration of Innovation](#)
November 13, 2014
- ✚ [ASU Sustainability Series Events](#)
- ✚ [Green Building Lecture Series](#)
Granite Reef Senior Center Scottsdale, AZ